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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER	
TRIEU, VAN THANH	
ART UNIT	**PAPER NUMBER**
2636	

DATE MAILED: 03/31/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/086,586	GREENBAUM, MYRON H.	
	Examiner	Art Unit	
	Van T Trieu	2632	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *22 March 2005* .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-55* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-55* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

1. Claims 1-48 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Monroe** [US 5,798,458] in view of **Murray et al** [US 6,385,513].

Regarding claim 1, the claimed one or more black boxes (the aircraft record black boxes 52 and/or data and voice black boxes (not shown), see Figs. 1, 2 and 4, col. 3, lines 13-15, col. 5, lines 60-63 and col. 6, lines 44-46); and the one or more transmitters (the ground link transceiver 76 receives of detected event of a catastrophic event from wireless transmitters 116e-m, and then transmitted to ground tracking control station via antenna 80, see Figs. 4-9, abstract, col. 3, lines 12 and col. 6, lines 24-27 and 44-52); and the one or more sensors (sensors 19e-19m with wireless transmitters 116e-m, see Figs. 4-9, col. 3, lines 28-32, col. 5, lines 11-32 and col. 6, lines 24-32); but **Monroe** fails to disclose the event is transmitted/reported only when a sensor detects an operating parameter that is outside a normal operational range. However, **Monroe** teaches that the multiplex processor 96, 596 or high sped multiplexer processor 696 receives sensed the catastrophic events/signals of malfunctions or a structure failure of the aircraft from each sensors 191-19m and then process to generates an output signal on line 105 for

introduction into the back box recorder 52 and to an output data signal on line 108 as desired, which can be input into a ground link transceiver 76 and transmitted to a ground control station via variety of RF communications 80 including satellite communication, see Figs. 1-9, col. 2, lines 49-50, col. 3, lines 5-12, col. 6, lines 44-60, col. 8, lines 1-25 and col. 10, lines 1-45. **Murray et al** suggests that a airborne distress downlink 200 includes a microprocessor 300 configured independently of any one of the downlink systems, to determine a priority order of emergency, distress or critical data received from one of the flight sensors 216 out of range conditions to be recorded onto cockpit audio/cockpit voice recorder 164/180, and for automatically transmitting of compressed critical flight data only to a ground-based data storage center via different selected HF, VHF and UHF data links and/or satellite communication unit 102, see Figs. 5 and 6, col. 3, lines 61-67, col. 4, lines 3-22, col. 9, lines 45-66, col. 10, lines 25-35, col. 13, lines 5-67, col. 14, lines 1-55 and col. 15, lines 22-35. Therefore, it would have been obvious to one skill in the art at the time the invention was made to substitute the airborne distress down link of **Murray et al** for the multiplex processor of **Monroe** for independently operating to send emergency data packet to a ground station without interference or pact with other normal aircraft operation information data, which can causing of delay, jam or loosing of the detected critical information data. The airborne distress down link provides a greater effectively to save the aircraft and life during an emergency situation.

Regarding claim 2, all the claimed subject matters are discussed between **Monroe** and **Murray et al** in respect to claim 1 above, and including the processor/modem that receives and compressed the aircraft operational data (the DSP 296, 696 and/or multiplexer/compressor 96, see Figs. 4-13, col. 6, lines 1-17, col. 7, lines 10-67 and col. 11, lines 36-38).

Regarding claim 3, all the claimed subject matters are discussed between **Monroe** and **Murray et al** in respect to claim 1 above, and including the bus to which the black box, the processor and the one or more transmitters are connected (the line 212 connected between the DSP/multiplexer 96, black box/recorder 52, and ground link radio 76, 80 see Fig. 4.

Regarding claim 4, all the claimed subject matters are discussed between **Monroe** and **Murray et al** in respect to claim 1 above, and including the ground-base receiver (ground-base receiving data relating to critical components and areas of and aircraft during flight by aircraft ground link transceiver 76, see Fig. 4, col. 4, lines 11-14 and col. 6, lines 46-52).

Regarding claim 5, all the claimed subject matters are discussed between **Monroe** and **Murray et al** in respect to claim 1 above, and including the satellite receiver (GPS receiver 72, see Figs. 4 and 7, col. 6, lines 54-60).

Regarding claim 6, all the claimed subject matters are discussed between **Monroe** and **Murray et al** in respect to claim 1 above, and including the sensors 19e-19m with corresponding transmitters 116e-116m, see Figs. 4-9).

Regarding claim 7, all the claimed subject matters are discussed between **Monroe** and **Murray et al** in respect to claim 1 above, and including the sensors 19e-19m with corresponding transmitters 116e-116m, see Figs. 4-9).

Regarding claim 8, all the claimed subject matters are discussed between **Monroe** and **Murray et al** in respect to claim 1 above, and including the data and voice black boxes 52.

Regarding claim 9, all the claimed subject matters are discussed between **Monroe** and **Murray et al** in respect to claim 1 above, see col. 5, lines 60-61

Regarding claim 10, all the claimed subject matters are discussed between **Monroe** and **Murray et al** in respect to claim 1 above, the voice black boxes (not shown), see col. 5, lines 62-65.

Regarding claim 11, all the claimed subject matters are discussed between **Monroe** and **Murray et al** in respect to claim 1 above.

Regarding claim 12, all the claimed subject matters are discussed between **Monroe** and **Murray et al** in respect to claim 1 above, the wireless transmitters 116e-116m, see Figs. 4-9.

Regarding claim 13, all the claimed subject matters are discussed between **Monroe** and **Murray et al** in respect to claim 1 above, and including the different frequency of each transmitter (unique frequency for each transmitters 116e-116m, see Fig. 4-9, col. 9, lines 52-55 and col. 12, lines 18-27)

Regarding claim 14, all the claimed subject matters are discussed between **Monroe** and **Murray et al** in respect to claim 1 above, and the sensor readings (the pilot monitor, display and indicators 55 for displaying/indicating parameters from each sensors 19a-19m, see Figs. 3, 7-9 and 12, col. 5, lines 63-65 and col. 6, lines 6-14); and the control signals (control panel 54 and control module 86, see Figs. 1 and 12, col. 5, lines 63-65 and col. 8, lines 18-67 and col. 9, lines 1-41).

Regarding claim 15, all the claimed subject matters are discussed between **Monroe** and **Murray et al** in respect to claim 1 above, and including voice signals in the cockpit 18 for recording in a voice recorder or voice black box 52, see Fig. 1.

Regarding claim 16, all the claimed subject matters are discussed between **Monroe** and **Murray et al** in respect to claim 1 above, and including the video image sensor devices 20-50, see col. 5, lines 40-59 and col. 8, lines 26-55).

Regarding claim 17, all the claimed subject matters are discussed between **Monroe** and **Murray et al** in respect to claim 1 above, the sensors 19a-19m, the wireless transmitters 116e-116m and the data and voice recorders 52, see Figs. 4-9.

Regarding claim 18, all the claimed subject matters are discussed between **Monroe** and **Murray et al** in respect to claims 2 and 19 above.

Regarding claim 19, all the claimed subject matters are discussed between **Monroe** and **Murray et al** in respect to claims 6 and 17 above.

Regarding claim 20, all the claimed subject matters are discussed between **Monroe** and **Murray et al** in respect to claims 7 and 17 above.

Regarding claim 21, all the claimed subject matters are discussed between **Monroe** and **Murray et al** in respect to claims 4 and 16 above.

Regarding claim 22, all the claimed subject matters are discussed between **Monroe** and **Murray et al** in respect to claims 5 and 16 above,

Regarding claim 23, all the claimed subject matters are discussed between **Monroe** and **Murray et al** in respect to claims 14 and 19 above.

Regarding claim 24, all the claimed subject matters are discussed between **Monroe** and **Murray et al** in respect to claims 15 and 19 above.

Regarding claim 25, all the claimed subject matters are discussed between **Monroe** and **Murray et al** in respect to claims 16 and 24 above.

Regarding claim 26, the method claimed limitations are met by the discussed between **Monroe** and **Murray et al** in respect to claim 1 above.

Regarding claim 27, all the claimed subject matters are discussed between **Monroe** and **Murray et al** in respect to claims 2 and 26 above.

Regarding claim 28, all the claimed subject matters are discussed between **Monroe** and **Murray et al** in respect to claims 2 and 26 above.

Regarding claim 29, all the claimed subject matters are discussed between **Monroe** and **Murray et al** in respect to claims 3 and 26 above, see Figs. 4-9.

Regarding claim 30, all the claimed subject matters are discussed between **Monroe** and **Murray et al** in respect to claims 3 and 27 above, see Figs. 4-9.

Regarding claim 31, all the claimed subject matters are discussed between **Monroe** and **Murray et al** in respect to claims 4 and 26 above.

Regarding claim 32, all the claimed subject matters are discussed between **Monroe** and **Murray et al** in respect to claims 5 and 26 above.

Regarding claim 33, all the claimed subject matters are discussed between **Monroe** and **Murray et al** in respect to claims 14 and 26 above.

Regarding claim 34, all the claimed subject matters are discussed between **Monroe** and **Murray et al** in respect to claims 15 and 26 above.

Regarding claim 35, all the claimed subject matters are discussed between **Monroe** and **Murray et al** in respect to claims 16 and 34 above.

Regarding claim 36, the method claimed limitations are met by the discussed between **Monroe** and **Murray et al** in respect to claim 17 above.

Regarding claim 37, all the claimed subject matters are discussed between **Monroe** and **Murray et al** in respect to claims 2 and 36 above.

Regarding claim 38, all the claimed subject matters are discussed between **Monroe** and **Murray et al** in respect to claims 3 and 36 above.

Regarding claim 39, all the claimed subject matters are discussed between **Monroe** and **Murray et al** in respect to claims 1 and 2 above.

Regarding claim 40, all the claimed subject matters are discussed between **Monroe** and **Murray et al** in respect to claim 39 above, and including the black boxes.

Regarding claim 41, all the claimed subject matters are discussed between **Monroe** and **Murray et al** in respect to claim 39 above, and including the transmitters 116e-116m, see Figs. 4-9.

Regarding claim 42, all the claimed subject matters are discussed between **Monroe** and **Murray et al** in respect to claims 5 and 39 above.

Regarding claim 43, all the claimed subject matters are discussed between **Monroe** and **Murray et al** in respect to claim 39 above, the additional sensors 19e-19m and additional transmitters 116e-116m, see Figs. 1 and 4-9.

Regarding claim 44, all the claimed subject matters are discussed between **Monroe** and **Murray et al** in respect to claims 1 and 2 above.

Regarding claim 45, the method claimed limitations are met by discussed between **Monroe** and **Murray et al** in respect to claims 1 and 2 above.

Regarding claim 46, all the claimed subject matters are discussed between **Monroe** and **Murray et al** in respect to claims 4 and 45 above.

Regarding claim 47, all the claimed subject matters are discussed between **Monroe** and **Murray et al** in respect to claims 5 and 45 above.

Regarding claim 48, all the claimed subject matters are discussed between **Monroe** and **Murray et al** in respect to claim 1 above.

2. Claims 49-55 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Monroe** and **Murray et al** and further in view of **Murphy** [US 5,786,773]. Regarding claims 49-55, **Monroe** fails to disclose the transmitter can wirelessly transmit the compressed aircraft operational data from the aircraft using burst transmission techniques. However, **Monroe** teaches that the aircraft radio transceiver 76 transmits of detected event/incidents data signal from the wireless sensors 19e-m to ground

tracking control station via antenna 80, and the data signal is processed by a multiplexer 96 in digital compressed data, see Figs. 4 and 12, col. 6, lines 44-55 and col. 10, lines 1-45. **Murphy** suggests that burst transmissions link between the aircraft and ground based station employs a pseudolite 130 including a pseudolite signal generator 1004 that produces a pseudorandom noise code modulated BPPSK signal. The burst transmissions are pulsed with a low duty cycle pulse in order to prevent the pseudolite signal 134 from interfering with the reception of GPS satellite signals 112, see Figs. 1 and 10, col. 21, lines 59-67, col. 22, lines 1-38 and col. 23, lines 37-64. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to substitute the burst transmissions of **Murphy** for the radio transmission of **Monroe** and **Murray et al** because the burst transmission prevents the data signals from significantly degrading normal GPS satellite signal receptions and increases the available signal-to-noise ration and enhances the potential accuracy of the system.

Conclusion

3. Examiner is very regrettable to have a withdrawal from issue and to introduce a new ground of rejection based on the additionally cited reference of **Murray et al** to make the rejection smoother.

4. Any inquiry concerning this communication or earlier communications from examiner should be directed to primary examiner **Van Trieu** whose telephone number

is (571) 272-2972. The examiner can normally be reached on Mon-Fri from 7:00 AM to 3:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. **Jeffery Hofsass** can be reached on (571) 272-2981.

Van Trieu
Primary Examiner
Date: 3/24/05